

Name: \_\_\_\_\_

### at1110paper\_practice\_test (v108)

1. Solve the equation with factoring by grouping.

$$15x^2 + 12x + 10x + 8 = 0$$

$$(3x + 2)(5x + 4) = 0$$
$$x = \frac{-2}{3} \quad x = \frac{-4}{5}$$

2. Expand the following expression into standard form.

$$(2x + 3)(2x - 3)$$

$$4x^2 - 6x + 6x - 9$$
$$4x^2 - 9$$

3. Solve the equation.

$$(7x + 8)(4x - 3) = 0$$

$$x = \frac{-8}{7} \quad x = \frac{3}{4}$$

4. Expand the following expression into standard form.

$$(3x + 7)^2$$

$$9x^2 + 21x + 21x + 49$$
$$9x^2 + 42x + 49$$

5. Expand the following expression into standard form.

$$(5x - 6)(7x + 4)$$

$$35x^2 + 20x - 42x - 24$$

$$35x^2 - 22x - 24$$

6. Factor the expression.

$$x^2 - 9x + 20$$

$$(x - 5)(x - 4)$$

7. Solve the equation.

$$10x^2 - 20x + 10 = 3x^2 + 5x - 2$$

$$7x^2 - 25x + 12 = 0$$

$$(7x - 4)(x - 3) = 0$$

$$x = \frac{4}{7} \quad x = 3$$

8. Factor the expression.

$$81x^2 - 49$$

$$(9x + 7)(9x - 7)$$